



Overview

Points To Remember About Sports Injuries in Youth

- Common sports injuries are: sprains and strains; growth plate injuries; and repetitive motion injuries.
- Sports injuries are first treated with R-I-C-E: Rest, Ice, Compression (pressure on the injury), Elevation (raise the injured area above the heart).
- Your child can prevent sports injuries by following safe exercise habits.
- Playing it safe in heat is also important.

Although sports injuries can range from scrapes and bruises to serious brain and spinal cord injuries, most fall somewhere between the two extremes. Here are some of the more common types of injuries:

- [Sprains and strains.](#)
- [Growth plate injuries.](#)
- Repetitive motion injuries.

Learn more about [sports injuries](#).

Types

Sprains and Strains

A sprain is an injury to a ligament, one of the bands of tough, fibrous tissue that connects two or more bones at a joint and prevents excessive movement of the joint. An ankle sprain is the most common athletic injury.

A strain is an injury to either a muscle or a tendon. A muscle is a tissue composed of bundles of specialized cells that, when stimulated by nerve messages, contract and produce movement. A tendon is a tough, fibrous cord of tissue that connects muscle to bone. Muscles in any part of the body can be injured.

Learn more about [sprains and strains](#).

Growth Plate Injuries

In some sports accidents and injuries, the growth plate may be injured. The growth plate is the area of developing tissues at the end of the long bones in growing children and adolescents. When growth is complete, sometime during adolescence, the growth plate is replaced by solid bone. The long bones in the body include:

- The long bones of the hand and fingers (metacarpals and phalanges).
- Both bones of the forearm (radius and ulna).
- the bone of the upper leg (femur).
- The lower leg bones (tibia and fibula).
- The foot bones (metatarsals and phalanges).

If any of these areas becomes injured, it's important to seek professional help from an orthopaedic surgeon, a doctor who specializes in bone injuries.

Learn more about [growth plate injuries](#).

Repetitive Motion Injuries

Painful injuries such as stress fractures (a hairline fracture of the bone that has been subjected to repeated stress) and tendinitis (inflammation of a tendon) can occur from overuse of muscles and tendons. Some of these injuries don't always show up on x-rays, but they do cause pain and discomfort. The injured area usually responds to rest, ice, compression, and elevation (RICE). Other treatments can include crutches, cast immobilization, and physical therapy.

Treatment

Treatment for sports-related injuries will vary by injury. But if your child suffers a soft tissue injury (such as a sprain or strain) or a bone injury, the best immediate treatment is easy to remember: RICE (Rest, Ice, Compression, Elevation) the injury:

- **Rest:** Reduce or stop using the injured area for at least 48 hours. If your child has a leg injury, he or she may need to stay off of it completely.
- **Ice:** Put an ice pack on the injured area for 20 minutes at a time, four to eight times per

day. You can use a:

- Cold pack.
- Ice bag.
- Plastic bag filled with crushed ice that has been wrapped in a towel.
- **Compression:** Ask your child's doctor about elastics wraps, air casts, special boots, or splints that can be used to compress an injured ankle, knee, or wrist to reduce swelling.
- **Elevation:** Keep the injured area elevated above the level of the heart to help decrease swelling. Use a pillow to help elevate an injured limb.

Get professional treatment if any injury is severe. A severe injury means having an obvious fracture or dislocation of a joint, prolonged swelling, or prolonged or severe pain.

Living with them

After the Injury Heals: Keep Kids Exercising

It's important that kids continue some type of regular exercise after the injury heals. Exercise may reduce their chances of obesity, which has become more common in children. It may also reduce the risk of diabetes, a disease that can be associated with a lack of exercise and poor eating habits. Exercise also helps build social skills and provides a general sense of well-being. Sports participation is an important part of learning how to build team skills.

Prevention

General Sports Safety

- Enroll your child in organized sports through schools, community clubs, and recreation areas that are properly maintained. Any organized team activity should demonstrate a commitment to injury prevention. Coaches should be trained in first aid and cardiopulmonary resuscitation (CPR), and should have a plan for responding to emergencies. Coaches should be well versed in the proper use of equipment, and should enforce rules on equipment use.
- Organized sports programs may have adults on staff who are certified athletic trainers. These individuals are trained to prevent, recognize, and provide immediate care for athletic injuries.
- Make sure your child has – and consistently uses – proper gear for a particular sport. This may reduce the chances of being injured.
- Make warm-ups and cool-downs part of your child's routine before and after sports participation. Warm-up exercises make the body's tissues warmer and more flexible. Cool-down exercises loosen muscles that have tightened during exercise.
- Make sure your child has access to water or a sports drink while playing. Encourage him or her to drink frequently and stay properly hydrated. Remember to include sunscreen and

a hat (when possible) to reduce the chance of sunburn, which is a type of injury to the skin. Sun protection may also decrease the chances of malignant melanoma – a potentially deadly skin cancer – or other skin cancers that can occur later in life.

- Learn and follow safety rules and suggestions for your child's particular sport. You'll find some more sport-specific safety suggestions below.

Safety Tips for All Sports

- Be in proper physical condition to play the sport.
- Follow the rules of the sport.
- Wear appropriate protective gear (for example, shin guards for soccer, a hard-shell helmet when facing a baseball or softball pitcher, a helmet and body padding for ice hockey).
- Know how to use athletic equipment.
- Always warm up before playing.
- Avoid playing when very tired or in pain.
- Get a preseason physical examination.
- Make sure adequate water or other liquids are available to maintain proper hydration.

Adapted from *Play It Safe, a Guide to Safety for Young Athletes*, with permission of the American Academy of Orthopaedic Surgeons.

Play it Safe in the Heat

- Schedule regular fluid breaks during practice and games. Kids need to drink 8 ounces of fluid – preferably water – every 20 minutes, and more after playing.
- Have your child wear light-colored, “breathable” clothing.
- Make player substitutions more frequently in the heat.
- Use misting sprays on the body to keep cool.
- Know the signs of heat-related problems, including confusion; dilated pupils, dizziness, fainting; headache, heavy perspiration; nausea, pale and moist or hot, dry skin, weak pulse, and weakness. If your child experiences any combination of these symptoms or doesn't seem quite right, seek medical attention immediately.

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Related Resources

U.S. Food and Drug Administration

Toll free: 888-INFO-FDA (888-463-6332)

Website: <https://www.fda.gov>

[Drugs@FDA](https://www.accessdata.fda.gov/scripts/cder/daf) at <https://www.accessdata.fda.gov/scripts/cder/daf>. [Drugs@FDA](https://www.accessdata.fda.gov/scripts/cder/daf) is a searchable catalog of FDA-approved drug products.

Centers for Disease Control and Prevention, National Center for Health Statistics

Website: <https://www.cdc.gov/nchs>

BAM! Body and Mind

Website: <https://www.cdc.gov/bam/index.html>

President's Council on Physical Fitness, Sports & Nutrition

Website: <https://www.fitness.gov>

American Academy of Orthopaedic Surgeons

Website: <https://www.aaos.org>

American Academy of Pediatrics

Website: <https://www.aap.org>

American College of Rheumatology

Website: <https://www.rheumatology.org>

American College of Sports Medicine

Website: <https://www.acsm.org>

American Medical Society for Sports Medicine

Website: <https://www.amssm.org>

American Orthopaedic Society for Sports Medicine

Website: <https://www.sportsmed.org>

American Physical Therapy Association

Website: <https://www.apta.org>

National Athletic Trainers Association

Website: <https://www.nata.org>

National Federation of State High School Associations

Website: <https://www.nfhs.org>

Arthritis Foundation

Website: <https://www.arthritis.org>

SAFE KIDS Worldwide

Website: <https://www.safekids.org>

If you need more information about available resources in your language or other languages, please visit our webpages below or contact the NIAMS Information Clearinghouse at NIAMSInfo@mail.nih.gov.

- [Asian Language Health Information](#)
- [Spanish Language Health Information](#)

Join a Clinical Trial

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Related Information

[¿Qué son las lesiones deportivas? Esenciales: hojas informativas de fácil lect...](#)

View/Download/Order Publications

[Preventing Musculoskeletal Sports Injuries in Youth: A Guide for Parents](#)

[Ana's Story: How she and her family learned about sports injuries/La historia d...](#)

[Growth Plate Injuries, Questions and Answers about](#)